

REMARKS

In the latest Office Action, claims 15, 18-19, 21-24, and 26-27 were rejected under 35 U.S.C. 102(e) as being anticipated by Johnson et al. '701 or Johnson et al. '589. Applicants previously pointed out that in the embodiment of the Johnson et al. references where two or more melt-flowable layers are used, the layer with the greater melt flow rate is on top. This is in contrast to the sealant and flow control agent combination of the present invention, in which the layer with the greater melt flow rate (the sealant) is on the bottom. However, the Examiner has taken the position that the relationship between the layers and the substrate is irrelevant, "since a substrate is not claimed and since a specific relationship between the layers and a substrate is not claimed."

While applicants disagree with that position, with this amendment, independent claims 15, 26, 30 and 31 have been amended to clarify that the combination sealant and flow control agent overlies and seals a gap in a substrate. It is also clear from the amended claims that the sealant (having a higher melt flow rate) is on the surface of the substrate and flows into the gap or cavity of the substrate, while the flow control agent (having a lower melt flow rate) is on the surface of the sealant.

The claims as amended are believed to clearly distinguish over the teachings of the Johnson et al. references, which teach that their top layer is formulated to have greater melt flow rate than the bottom layer so that upon heating, the top layer will flow and encapsulate the bottom layer. See Johnson et al. '701, col. 17, lines 50-57; and Johnson et al. '589, col. 16, lines 1-7. There is no teaching or suggestion in either of the Johnson et al. references of applying a sealant and flow control agent in the claimed configuration for the purpose of sealing a gap in a substrate. Rather, the Johnson references are concerned with providing melt-flowable layers on the surface of a substrate to flow and conform to the surface of the substrate.

In response to applicants' previous arguments that the Johnson et al. references do not teach a heat **expandable** sealant, the Examiner asserts that because the

Johnson et al. references teach a heat expandable second melt flowable layer, "it would have been obvious to include blowing agents in the first melt flowable layer." However, there is no teaching or suggestion in the Johnson et al. references of including blowing agents in their first melt flowable layer. And, as the applicants' amended claims specifically recite the relationship between the sealant/flow control agent layers and the substrate, the Examiner cannot ignore those features of the claims which patentably distinguish over the cited references. Further, there is no teaching or suggestion in Johnson et al. of including a blowing agent in either of their melt flowable layers for the purpose of expanding the sealant to fill gaps or cavities as taught in the present invention. Rather, Johnson et al. teach that the use of blowing agents or foaming agents are included to "impart a convex shape to a surface." See Johnson et al. '589, col. 15, lines 42-45.

In response to applicants' previous arguments that the Johnson references do not teach a flow control agent on the **surface** of the sealant layer as claimed, the Examiner has taken the position that the Johnson references teach the use of web, scrim, thermoplastic film, and PSA layers, "all of which meet the term 'flow control agent'." However, as applicants have previously pointed out and as acknowledged by the Examiner, the Johnson references teach that the web or scrim layers are provided **between** two melt flowable layers. The Examiner has taken the position that such layers "would still contact the surface of the melt flowable layers and that the "surface" limitation does not patentably distinguish over the prior art. With this amendment, applicants have added new claim 32, which recites that the combination consists essentially of the heat expandable sealant and flow control agent. This clearly excludes the teachings of the Johnson et al. references, which require a three-layer structure, i.e., two melt-flowable layers with a scrim layer and/or an additional film/PSA layer.

Applicants further wish to point out that there is no teaching or suggestion in Johnson et al. that their melt flowable layers would exhibit less sagging as does the sealant/flow control agent combination of the present invention. The Examiner asserts

that the first layer of Johnson "would remain solid while the second layer melts, thus inherently exhibiting less sagging than without a solid layer attached to its surface." However, the Examiner is referring to one of multiple embodiments of Johnson. In order for their to be inherency, the asserted result--less sagging--would need to occur for all embodiments. That is clearly not the case. Further, the Examiner must take into account the claimed configuration of the melt flowable layers of the Johnson references, which differs from that of the sealant/flow control agent combination of the present invention. There is no teaching or suggestion in the Johnson et al. references that less sagging would occur if a melt flowable layer having a lower melt flow rate were placed on the surface of a melt flowable layer having a higher melt flow rate as in the present invention, and such result is not inherent from those teachings.

Nor do Johnson et al. references teach or suggest the use of a flow control agent in the form of a dry coating as recited in claim 24. Claims 15, 18-19, 21, 23-24 and 26-27 are clearly patentable over Johnson et al. '701 and '589

Claims 15, 17-19, 21-24, 26-27 and 30 have been rejected under 35 U.S.C. 103(a) as being unpatentable over either Johnson et al. '589 or Johnson et al. '701, each in view of Greenwood. The Examiner has cited Greenwood for teaching an expandable sealant composition containing a blowing agent in microspheres. The Examiner asserts that Greenwood teaches filling gaps in the automotive industry, and that it would have been obvious to use the blowing agents of Greenwood in the melt-flowable layers of the Johnson inventions. However, there is no motivation for one skilled in the art to do so. Johnson et al. are not concerned with sealing large gaps encountered in automotive body components as in the present invention, but rather are concerned with providing a smooth surface to a substrate to conceal defects and surface imperfections and seal small gaps between joints. Nor do Greenwood teach filling large gaps in automotive body components, but rather teach a sealant for providing a waterproof seal between a window and window frame in automotive applications (see col. 1, lines 23-40). One skilled in the art would not look to the

teachings of Greenwood to modify Johnson et al. Even if one were to make the proposed substitution, the claims would still not be met as Johnson et al. do not teach or suggest the claimed combination of a heat activated sealant and flow control agent overlying and sealing a cavity in a substrate where the flow control agent is on the surface of the expandable sealant.

With regard to claim 30, which recites that the flow control agent comprises polyvinyl acetate, the Examiner has now taken the position that the Johnson references teach that pressure sensitive adhesive (PSA) layers may be applied to the melt-flowable layer, and that vinyl acetate PSAs may be used, referring to '589 col. 16, lines 16-30 and '701, col. 17 line 66 - col. 18, lines 13. However, the Johnson references teach that a number of PSAs may be used, with the preferred PSA being an acrylate polymer, not polyvinyl acetate. Further, there is no teaching or suggestion in Johnson et al. that their PSAs would function as a flow control agent as set forth in the present invention. Rather, the PSA of the Johnson references is used to allow the melt-flowable sheet to be attached to a substrate surface before the melt flow layer is heated. See '701, col. 17, lines 58-61. As such, the configuration of Johnson's melt-flowable layer/PSA is such that the PSA would be on the bottom of the melt-flowable layer, not on top of the sealant as taught and claimed by applicants.

Claims 28-29 and 31 have been rejected under 35 U.S.C. 103(a) as being unpatentable over either Johnson et al. '589 or Johnson et al. '701, each in view of Delle Donne et al. Delle Donne has been cited for teaching a heat reactive two-component patch for use in sealing gage and drain holes in automotive bodies. The patch material is provided in the form of a sheet which can be later thermoformed. The Examiner acknowledges that the Johnson references do not teach melt flowable layers provided in the form of a thermoformed part as claimed, but has taken the position that it would have been obvious to do so in view of Delle Donne, asserting that such parts would inherently be considered "pocket sealers" since "they would be functional for sealing holes in automotive bodies." Applicants strongly disagree. Delle

Donne provides no motivation to modify the Johnson references as Delle Donne is not concerned with controlling the flow of heat activated sealants which are applied to large gaps as in the present invention, but rather is concerned with providing a patch for covering gage and drain holes in automotive bodies. While such a patch may be thermoformed to cover holes, there is no teaching or suggestion in Delle Donne of the use of a combination of layers having different melt flow rates for the purpose of avoiding sagging as taught in the present invention. Nor do Delle Donne teach or suggest thermoforming the patch into a pocket sealer as claimed.

Nor is there any motivation to modify the Johnson et al. references to thermoform their melt-flowable layers as the Examiner has proposed. Johnson et al. is not concerned with filling large gaps in automotive components, but rather is concerned with providing an aesthetic appearance to a substrate surface which includes covering a seam or joint as demonstrated in their drawing figures. Thermoforming the layers of Johnson et al. into a shape would serve no useful purpose and would, in fact, defeat the purpose of having a melt-flowable sheet which, when heated, "conforms to the surface of the substrate." See '701, col. 4, lines 7-8. Claims 28-29 and 31 are clearly patentable over the cited references.

Claims 28-29 and 31 have been further rejected under 35 U.S.C. 103(a) as being unpatentable over either Johnson et al. '589 or Johnson et al. '701, each in view of Greenwood, and further in view of Delle Donne et al. The Examiner again maintains that it would have been obvious to combine the teachings of the references to form a thermoformed part. Applicants submit that claims 28-29 and 31 are clearly patentable over the cited references for the same reasons discussed above. The teachings of Greenwood and Delle Donne et al. provide no motivation to modify the Johnson references.

Finally, Applicants note the Examiner's indication that if claim 26 is found to be allowable, claim 22 will be objected to under 35 CFR 1.75 as being a substantial duplicate thereof. With this amendment, claim 22 has been cancelled.

For all of the above reasons, applicants submit that claims 15, 17-19, 21, 23-24, 26, 28-31, as amended, and new claim 32 are patentable over the cited references. Early notification of allowable subject matter is respectfully requested.

Respectfully submitted,

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